

IN THE UNITED STATES PATENT AND TRADEMARK OFFICE
BEFORE THE BOARD OF PATENT APPEALS AND INTERFERENCES

Re Application of Mavrommati et al

Serial No.: 09/177,960

Filed: 10/23/98

Title: INFORMATION PROCESSING SYSTEM HAVING MULTIPLE
SEQUENTIAL SELECTION FIELDS

Atty. Docket No.: PHN 16-576

Group Art Unit: 2173

Examiner: Luu, Sy

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B. Millard
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APPELLANT'S BRIEF ON APPEAL UNDER 37 C.F.R. § 1.192

Honorable Commissioner of Patents and Trademarks
Washington, D.C. 20231

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Sir:

This is an appeal from the decision of the Examiner dated 27 March 2001, finally
rejecting claims 1-10 of the subject application.

I. REAL PARTY IN INTEREST

The above-identified application is assigned, in its entirety, to Philips Electronics
North America Corporation, a company organized under the laws of the State of
Delaware.

II. RELATED APPEALS AND INTERFERENCES

Appellant is not aware of any co-pending appeal or interference which will
directly affect or be directly affected by or have any bearing on the Board's decision in
the pending appeal.

III. STATUS OF CLAIMS

Claims 1-10 are pending in the application. Claims 1-10 stand rejected by the
Examiner under 35 U.S.C. 103(a).

IV. STATUS OF AMENDMENTS

No amendments were filed subsequent to the final rejection in the Office Action
dated 27 March 2001.

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V. SUMMARY OF THE INVENTION

The invention comprises a system and method for presenting selectable options to a user, in the form of icons. The invention is specifically designed for the presentation of icons that form a hierarchical menu structure, using a minimal amount of display area. (Applicants' page 1, line 28 through page 2, line 13.)

As is known in the art, the "human factors" considerations in the design of a user interface often distinguish a successful user interface from an unsuccessful user interface. The design of the user interface involves a tradeoff of a number of factors, including the tradeoff between consuming display space for providing user selectable options, and providing sufficient information to the user to facilitate the selection.

Hierarchical menu structures are designed to group related options and functions together under a common category, such as the "file", "edit", "view" categories common to Windows applications. Display space is consumed only for these category names. When the user selects a category, additional display space is consumed for the individual options, such as the "save", "save as", "print", etc. options within the Windows "file" category, but this display space is only consumed while the selection process is invoked, by the selection of the "file" option. If the selected option is also a hierarchical representation of lower-level options, these lower-level options are displayed when the user selects the option, thereby consuming additional display space. Often, the display of sub-options within a hierarchical structure obscures the display of the information item that the user is processing via the selection of these options and sub-options. The amount of display space consumed is directly proportional to the number of options available for the user to select. To minimize the display space, some Windows applications initially present a subset of the selectable options, based on a history of the particular user's past selections.

The Applicants present an alternative to the conventional display of hierarchical menu items. In the Applicants' invention, a single display space is consumed for each level of the hierarchy. At each level of the hierarchy, the options that are available are presented sequentially within the allocated display space. When the user selects an option at one level of the hierarchy, the sequential presentation 'freezes' at this level of the

hierarchy, and the sequential presentation of the sub-options at the next lower level of the hierarchy commences. (Applicants' page 4, lines 28-34).

In the Applicants' invention, each of the hierarchical levels are associated with a different display space, so that the user is able to immediately recognize where he or she is, relative to the hierarchical menu structure. Because the display of each level of the hierarchical menu items is limited to a single display space, regardless of the number of options at the particular hierarchical level, the interference with the display of the information item that the user is processing via the menu can be minimized. (Applicants' page 3, lines 12-16). Alternatively, again because each hierarchical layer is allocated a single display space, the single display spaces can be relatively large, thereby allowing for the display of an icon that contains information that facilitates the selection of the icon. That is, in a conventional icon display system, because many icons may be simultaneously presented, the icons are preferably made as small as possible, while still conveying symbolic meaning to the user. Oft times, because of the small size of conventional icons, the intended symbolic meaning of the icon is not conveyed to the user. In the Applicants' preferred embodiment, because only one icon is presented at a time at any level of the hierarchy, the size, and thereby the symbolic content, of the icon can be increased, without introducing a multiplicative effect caused by having many options at any particular level of the hierarchy. (Applicants' page 6, lines 26-32.)

The sequential display of hierarchically organized items in accordance with the Applicants' invention also facilitates an automated, or "broadcast", presentation of the items. In a broadcast presentation, the system automatically steps through each hierarchy, presenting the items and associated information at each level. While the item and associated information is being presented, the hierarchical structure is apparent to the user, because the (automatically) selected item at each level of the hierarchy is 'frozen' within the display space associated with its hierarchy level. The presentation of the hierarchical structure at the same time that the individual items within the hierarchy are displayed is expected to facilitate the user's understanding of the manner in which the items are organized, and thereby allow the user to efficiently locate items during future manual traversals of the hierarchy. (Applicants' page 7, line 4 through page 8, line 2.)

VI. ISSUES

Are claims 1-10 patentable under 35 U.S.C. 103(a) over Steele et al (USP 5,742,779, hereinafter Steele) in view of IBM Technical Disclosure Bulletin Vol. 35, Issue 4B, pp. 227-232, September 1992 (hereinafter IBM TDB)?

VII. GROUPING OF CLAIMS

Claims 1-10 stand or fall together.

VIII. ARGUMENT

*Are claims 1-10 patentable under 35 U.S.C. 103(a)
over Steele in view of IBM TDB?*

Steele teaches a method and system for displaying hierarchical menu items. Steele maintains two display areas: an "elevator" window, and a display window. At each level of the hierarchy, all of the icons that are available at that level are displayed in the display window. When the user selects an icon that corresponds to a lower level of the hierarchy, a miniature version of the selected icon is placed in the elevator window, and all of the icons that are available at the selected lower level are displayed in the display window. The elevator window is structured to contain the selected icons of each of the hierarchy levels, in a top-down fashion, to provide a graphic representation of the hierarchy as the user traverses the hierarchy. (Steele's FIGs. 7A-7F, and column 12, line 66 through column 13, line 67.)

Steele addressed the same issues that the Applicants addressed, and arrived at a substantially different means of effectively and efficiently conveying a hierarchical menu to a user. Steele chose to display the hierarchy in a pre-defined elevator window, and to display all of the options at each level of the hierarchy in a common display window. This is one method of presenting a hierarchical menu, but it is not the method that is taught and claimed by the Applicants. To conserve display space, Steele chose to present miniature versions of the icons in the elevator window. The Applicants, on the other hand, chose to preserve a full-sized version of the icon on the display, in its originally presented display area. Steele's presentation introduces a context shift, as the selected

icon is shrunk and placed in the elevator window; the Applicants' presentation introduces a display shift, as options at each level of the hierarchy are presented at their allocated display locations. Steele presents all of the options available to a user at each hierarchy level simultaneously; the Applicants present the options sequentially.

The IBM TDB teaches the presentation of options sequentially, and the Applicants reference this teaching in the Background of the invention, on page 1, line 12-20 of the Applicants' specification. The IBM TDB, however, is silent with regard to the use of this presentation scheme in a hierarchical menu structure.

The Applicants respectfully maintain that the Examiner is using impermissible hindsight reconstruction to arrive at the Applicants' invention. Steele is silent with regard to a sequential presentation, and the IBM TDB is silent with regard to a hierarchical menu structure. Steele addresses the same problem that the Applicants addressed, and arrived at a different solution. The IBM TDB did not address the problem that the Applicants addressed.

Furthermore, assuming in argument that one of ordinary skill in the art might be motivated to combine Steele and the IBM TDB, such a combination would not necessarily result in the Applicants' invention. Steele teaches the benefits of the elevator window throughout Steele's specification. Even if one of ordinary skill in the art were motivated to replace Steele's display window with a sequential presentation, to conserve display space, one of ordinary skill in the art would not be motivated to abandon Steele's window presentation of miniaturized icons that represent the hierarchy.

To arrive at the Applicants' invention from the combination of Steele and the IBM TDB, one of ordinary skill in the art would be required to ignore all of the teachings of Steele. The Examiner asserts that one of ordinary skill in the art would be motivated to replace the display window of Steele with the sequential option display of the IBM TDB, and also would be motivated to replace Steele's elevator window with the Applicants' presentation of each hierarchy icon in a separate display area. The Applicants respectfully maintain that the replacement of Steele's display window with the IBM TDB approach, and the replacement of Steele's elevator display with the Applicants' hierarchy-dependent display, effectively produces a replacement of Steele's teachings in their entirety. Absent

the Applicants' teachings, a combination of Steele and the IBM TDB could not produce the Applicants' invention without disregarding the teachings of Steele.

The Applicants specifically teach and claim a method and system wherein each group of selectable icons is presented sequentially in a defined field on a display. Steele teaches the simultaneous display of selectable icons in one area, and the subsequent relocation of the icon, or a miniaturized version of the icon, to another area. The IBM TDB is silent with regard to the display of multiple groups of selectable icons.

CONCLUSION

Because neither Steele nor the IBM TDB, individually or collectively, teach or suggest the sequential display of a first sequence of icons in a first field, and a sequential display of a second sequence of icons in a second field, as specifically taught and claimed by the Applicants, and because the suggested combination of Steele and the IBM TDB requires a rejection of each of the teaching of Steele regarding the display of hierarchically arranged icons, the Applicants respectfully requests that the Examiner's rejection of claims 1-10 under 35 U.S.C. 103(a) be reversed by the Board, and the claims be allowed to pass to issue.

Respectfully submitted,



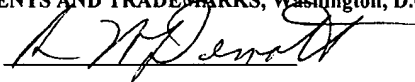
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CERTIFICATE OF MAILING

It is hereby certified that this correspondence is being deposited with the United States Postal Service as first-class mail in an envelope addressed to: COMMISSIONER OF PATENTS AND TRADEMARKS, Washington, D.C. 20231

On 25 August 2001

By



APPENDIX
CLAIMS ON APPEAL

1. An information processing system comprising:
 - a display,
 - processing means, arranged for displaying in a first field on the display a first sequence of first icons in a timed loop and repeatedly making the currently displayed first icon selectable, and
 - selecting means, arranged for selecting the selectable first icon,characterised in that
 - the processing means are arranged for displaying, upon selection of the selectable first icon, in a second field on the display a second sequence of second icons in a timed loop and for repeatedly making the currently displayed second icon selectable, and
 - that the selecting means are arranged for selecting the selectable second icon.
2. An information processing system as claimed in Claim 1, wherein the processing means are arranged for displaying, upon selection of the selectable first icon, an information item in an output field on the display.
3. An information processing system as claimed in Claim 1, wherein the processing means are arranged for displaying, upon selection of the selectable second icon, an information item in an output field on the display.
4. An information processing system as claimed in Claim 2, wherein the information item comprises a sequence of information sub-items in a timed loop.

5. A method for enabling a user to select an icon from a set of icons, comprising a plurality of first icons, said method comprising the steps of:
- displaying the first icons in a timed loop in a first field on a display and repeatedly making the currently displayed first icon selectable, and
 - detecting a selection of the selectable first icon,
- characterised in that the set of icons comprises a plurality of second icons and that the method further comprises the steps of:
- displaying, upon detection of the selection of the selectable first icon, the second icons in a timed loop in a second field on the display and repeatedly making the currently displayed second icon selectable, and
 - detecting a selection of the selectable second icon.
6. A method as claimed in Claim 5, comprising the step of displaying, upon selection of the selectable first icon, an information item in an output field on the display.
7. A method as claimed in Claim 5, comprising the step of displaying, upon selection of the selectable second icon, an information item in an output field on the display.
8. A method as claimed in Claim 6, wherein the information item comprises a plurality of information sub-items displayed in a timed loop.
9. An information processing system as claimed in Claim 4, wherein the information item comprises a sequence of information sub-items in a timed loop.
10. A method as claimed in Claim 7, wherein the information item comprises a plurality of information sub-items displayed in a timed loop.